This article describes polymyalgia rheumatica, including its symptoms, diagnosis, treatment, and differentiation from other systemic rheumatic autoimmune disorders.

**What is Polymyalgia Rheumatica?**

Polymyalgia rheumatica (PMR) is a chronic autoimmune inflammatory rheumatic disorder that primarily affects people older than 50 years. Women are affected twice as often as men. PMR was first described by Bruce in 1888 and called senile rheumatic gout because of its predilection for older persons.

The name polymyalgia rheumatica, which means many aching muscles, was first used in 1957. PMR primarily causes a systemic non-erosive type of arthritis characterized by aching and morning stiffness in the neck, shoulders, pectoral girdle, thighs, torso, and hips. The shoulders are most likely to be involved. Although pain initially occurs on one side of the body, both sides eventually become affected.

Pain is a more prominent feature than weakness, and pain and stiffness are worse after prolonged inactivity. Morning stiffness may make it difficult for some patients to get out of bed in the morning, and some patients complain of difficulty climbing stairs. Patients also experience a decreased active range of motion of joints secondary to pain.

**Association with Temporal Arteritis and Thyroid Disease**

PMR often occurs in association with temporal arteritis and it is known to also occur in patients with autoimmune thyroid disorders and rheumatoid arthritis. The incidence of PMR increases after age 50 and peaks in people who are between 70 and 80 years old. A higher prevalence of PMR is seen at higher latitudes and in Scandinavian countries and in U.S. communities having a strong Scandinavian ethnic background. Overall, whites are affected more than other ethnic groups.

**Symptoms and Disease Course**

Symptoms in PMR may occur abruptly or develop over 1-2 weeks. Patients may complain of a flu-like illness occurring shortly before the onset of rheumatic symptoms. While the proximal joints show greatest involvement, in half of all cases, distal manifestations may also be seen, predominantly affecting the knees and wrists.

Other symptoms include carpal tunnel syndrome, and swelling and pitting of the outer surface of the hands, fingers, wrists, ankles, and the tops of the feet. Unlike rheumatoid arthritis, in PMR small joint synovitis is uncommon. Systemic symptoms and signs affect
about one-third of patients and include fever, malaise, depression, fatigue, loss of appetite, and weight loss. Headache is reported in about half of all cases and frequently occurs over the side of the head, resembling symptoms of temporal arteritis. Some researchers think that polymyalgia rheumatica and temporal arteritis are variations of the same basic disorder.

Environmental Triggers

Although PMR is considered an autoimmune disorder, the exact mechanism for its development remains unclear. Patients with PMR often have HLA DRB1*04 and DRB1*01 alleles, which may influence disease severity. Suspected environmental triggers include the human parovirus B19, the adenovirus and the human parainfluenza virus.

Diagnosis

PMR is suspected in patients having persistent pain for at least one month with aching and morning stiffness in the neck, shoulder girdle and hip girdle that lasts at least 30 minutes. Shoulder pain is the most common occurrence. The erythrocyte sedimentation rate is elevated, usually more than 50 mm/hr, and the C-Reactive is also elevated with levels usually higher than 0.7 mg/dl. PMR is difficult to diagnose from remitting seronegative, symmetric synovitis with pitting edema (RS3PE) when edema of the hands and feet are present and the RA factor test is negative (seronegative). Some studies suggest that both PMR and RS3PE are different variations of the same basic disorder.

Imaging tests in patients with PMR show synovitis or joint fluid inflammation in the proximal joints (closer to the body) and periarticular structures or tissue surrounding the joints. For instance, edema of the hands is common. MRI and ultrasonography studies show that subdeltoid and subacromial bursitis are more prominent and common than joint and tendon inflammation. Electromyography or muscle biopsy studies show no selective muscle weakness or evidence of muscle disease. Because muscle studies are normal in PMR, some researchers theorize that the elastic lamina in blood vessels of the affected muscle groups are the primary target affected by the immune system.

PMR is often confused with other disorders. In elderly patients systemic lupus erythematosus (SLE) may sometime cause symptoms identical to those of PMR. Pleuritis, pericarditis, low white blood cell counts (leukopenia) and low platelet counts (thrombocytopenia) suggest SLE rather than PMR. The autoimmune disorder polymyositis is differentiated from PMR by the presence of high creatinine phosphokinase (CK, CPK) enzyme levels in polymyositis.

Treatment

Patients with polymyalgia rheumatica usually show a good response to corticosteroids, using 10-20 mg prednisone daily. Higher doses are used in patients who also have temporal arteritis. Treatment is usually required for one year although up to 50 percent of
patients may need treatment for 2 years, and up to 30 percent of patients require treatment for 3 years. The average disease course in PMR lasts 2-3 years although later relapses commonly occur. Symptoms may also worsen if corticosteroids are withdrawn or tapered too rapidly.

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